



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

The subject of the address of the retiring president Dr. Charles R. Van Hise, of the University of Wisconsin, will be on the "Economic Effects of the World War in the United States" and many of the discussions before the sections of the association and the special societies will be concerned with problems relating to the national emergency and with national preparedness. The addresses of the chairmen of the sections are:

SECTION A.—Luther P. Eisenhart. The Kinematical Generation of Surfaces.

SECTION B.—Henry A. Bumstead. Present Tendencies in Theoretical Physics.

SECTION C.—Julius Stieglitz. The Electron Theory of Valence and its Application to Problems of Inorganic and Organic Chemistry.

SECTION D.—Henry M. Howe. Some Needs of Engineering.

SECTION E.—Rollin D. Salisbury. The Educational Value of Geology.

SECTION F.—George H. Parker. An Underlying Principle in the Architecture of the Nervous System.

SECTION G.—C. Stuart Gager. The Near Future of Botany in America.

SECTION H.—Frederick W. Hodge. The Ancient Pueblo of Hawikuh.

SECTION I.—Louis I. Dublin. The Significance of our Declining Birth Rate.

SECTION K.—Edwin O. Jordan. Food-borne Infections.

SECTION L.—(Leonard P. Ayres absent—no address.)

SECTION M.—Whitman H. Jordan. The Future of Agricultural Education and Research in the United States.

### *THE GEOLOGICAL WORK OF PRESIDENT CHARLES R. VAN HISE*

THE address of Dr. Charles R. Van Hise as president of the American Association for the Advancement of Science is on an economic subject. Since his election to the presidency of the University of Wisconsin in 1903, he has devoted himself largely to work in education and

in economics, not, however, neglecting the geological researches in which he had attained such high distinction.

Due to Dr. Van Hise's early training in chemistry and metallurgy, and to his field work in pre-Cambrian regions, his dominant interest in geology has been in its chemical and physical phases. For many years he was engaged in the detailed mapping of pre-Cambrian formations in the Lake Superior country, during that time having published, with his associates, seven monographs of the United States Geological Survey. His interest in correlation problems involved in Lake Superior surveys led to a broader consideration of the pre-Cambrian of the United States, the results of which were brought together in a correlation paper (Archean and Algonkian) published in 1892, which was the first attempt to bring some order out of chaos in this field. While the correlations then proposed were based on necessarily incomplete data, and have been superceded in part by later work, his contribution to the subject marked an important step in advance which has been the basis for a great deal of the subsequent work on correlation.

Pre-Cambrian geology is inseparable from structural geology, and Van Hise's development of the principles of structural geology, published in connection with his principles of pre-Cambrian geology (1896), has served as a text on this subject for many years.

Closely involved in a study of the Lake Superior pre-Cambrian is the origin of the copper and iron ores, to which subject Van Hise has made many notable contributions. Enlarging his field studies of ores to cover the lead and zinc ores of the Mississippi Valley and other ores through North America, he was in a position in 1901 to present a general discussion of the genesis of ore bod-

ies ("Some Principles controlling the Deposition of Ores," *Trans. Am. Inst. Min. Engrs.*), in which he emphasized the relationship of ore concentration to the movement of ordinary ground waters, though recognizing other agencies as effective. While more recent studies have modified his conclusions in some particulars, his contribution to the subject remains to-day as probably the best known presentation of this point of view.

In connection with the studies above mentioned, Van Hise found it necessary to consider the problem of metamorphism of rocks, and out of this came his great monograph on metamorphism, in which the subject was for the first time presented systematically and intelligibly to the general geologist. His broad outline of metamorphic zones, conditions and processes has been the basis for much of the development in metamorphic geology which has proceeded since that time.

In the fields of pre-Cambrian correlation, genesis of ores, structural geology and metamorphic geology, Van Hise's contributions have been in each case distinctive in their systematic presentation and perspective. Even where treating previously known subject matter, his vigorous and comprehensive style brought the subject home in such perspective that much of the subsequent work along these lines has been strongly influenced by his work. He drew his pictures with bold, incisive lines, which challenged attention. Some of the salient features of his investigations have been the classification of deformative processes on the basis of zones of rock fracture and rock flowage, the classification of metamorphic processes on the basis of zones of katamorphism and anamorphism, and the emphasis on the normal flowage of underground waters in connection with the concentration of ores. Later studies in

all these subjects have required certain modifications of the general principles laid down by Van Hise, but in their broad outlines they still figure largely in the investigations of these fields of geology, and, even where not fully accepted, their influence is felt in the impetus they have given to advancement of knowledge in these fields.

### THE COAL SITUATION IN THE UNITED STATES

At the present time, when the fuel situation forces itself upon the attention of every one, any discussion of the coal problem that goes into the causes of the present unsatisfactory state of affairs should receive a careful hearing. Such a discussion is to be found in a bulletin by Chester G. Gilbert, entitled, "Coal Products: An Object Lesson in Resource Administration," just published by the United States National Museum and constituting the third paper of the series, "The Mineral Industries of the United States," in course of issue by the Division of Mineral Technology of this institution.

The author points out the magnitude of the coal resources of the United States and the dependency of national welfare upon their proper development. Yet with more coal than is found in any other country, or indeed on any other continent, this country has long been dependent upon foreign sources for such essential products made from coal as dyestuffs, fixed nitrogen, and many important drugs; and is today, with the first pinch of war stress, uncertain whether the fuel needs of the American home can be met during the coming month. The American public has never faced these shortages as phases of a single problem, but has first become alarmed at the dye shortage, then over the nitrogen dearth, and now